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ABSTRACT

In order to assess educators' beliefs about individualization of instruction and/or mastery learning, the School Climate Assessment Learning Environments (SCALE-I) was developed. SCALE-I is an attitude-type instrument consisting of 30 positive Belief Statements. Subjects were three groups of educators from the Department of Defense Dependents Schools (DODDS) in the central Germany area. Forty-one elementary teachers, 55 secondary teachers, and 8 administrators participated in the study. The study focused solely on beliefs, not on school practices. Results of the study indicate that the DODDS educators in the sample believe in individualization of instruction and/or mastery teaching. Because of their positive attitudes, a favorable climate for individualization and mastery teaching exists. It is concluded that study results may be helpful to DODDS administrators and teachers in pursuing further their positive climate for individualization and/or mastery learning. A copy of the SCALE-I questionnaire is appended. (JD)

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READINESS FOR INDIVIDUALIZATION AND MASTERY LEARNING

AN ASSESSMENT OF EDUCATIONAL BELIEFS

AMONG THREE GROUPS OF EDUCATORS

DEPARTMENT OF DEFENSE DEPENDENTS SCHOOLS (DODDS)

GERMANY REGION

BY

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JANUARY 1990

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Thanks also to the DODDS principals, assistant principals, and teachers who were so gracious and cooperative in helping with this study.

INTRODUCTION

In order to assess educators' beliefs about individualization of instruction and/or mastery learning, the researcher developed the School Climate Assessment of Learning Environments (SCALE-I). See Appendix I.

For the purposes of this study, individualization of instruction is basically defined as an attempt on the part of the teacher to meet the academic needs of the student (based on objectives) and move the student forward to identified success patterns for that particular student or groups of students.

Mastery learning in this writer's judgement is basically identical to individualization of instruction. Mastery learning by definition is instruction based on objectives. Whole group instruction is initiated followed by assessment, re-teaching, and re-assessment. The mastery learning model would take on the subsequent line of flow: Mastery learning (ML) = Instruction => Assessment => Re-Grouping Students into Enrichment and Correctives Activities => Reteaching => Re-Assessment.

Taken collectively, the thirty Belief Statements in SCALE-I represent the author's definition of individualization of instruction and/or mastery learning.

SCALE-I is an attitude type instrument (Likert method) consisting of 30 Belief Statements. All Belief Statements are stated in positive terms with strongly agree, agree, undecided, disagree, and strongly disagree choices. Strongly agree thru strongly disagree carry values of 5,4,3,2, and 1 respectively with strongly agree or 5 being the most desirable response.

PROCEDURE

During September and October 1989, educators from the Department of Defense Dependents Schools (DODDS) representing three distinct groups of professionals were polled using SCALE-I. Principals of five schools (three elementary and two secondary) assisted in distribution of 180 SCALE-I questionnaires to teaching faculty and selected administrators. 104 useable SCALE-I questionnaires were returned representing the following sample: 41 elementary teachers (ELT); 55 secondary teachers (SET); and 8 administrators (ADM). The administrators were from both elementary and secondary schools and were a combination of head principals and assistant principals. Enrollment at the five schools was approximately 5,000 students.

All educators were from DODDS schools in the Germany Region (specifically central Germany schools). Personnel and schools were promised anonymity by this researcher in carrying out the study.

Each of the three groups (ELT, ADM, and SET) was asked, via questionnaire, to respond to the 30 Belief Statements of SCALE-I. The following directions were given to each respondent:

> Please read the attached Belief Statements and using the key provided, circle your ONE best answer. The statements SHOULD NOT be interpreted to mean that your school IS OR IS NOT doing what the statement indicates but only to what degree do you, as an educator, agree or disagree with the statement as constructed. SCHOOLS AND RESPONDENTS WILL NOT BE IDENTIFIED IN THIS STUDY.

TABLE I

EDUCATORS IN THE SAMPLE

	Useable Questionnaires Returned
Elementary Teachers - ELT	41
Administrators - ADM	8
Secondary Teachers - SET	55
TOTAL =	104

SCALE-I data were analyzed using the statistic, Analysis of Variance (ANOVA). An F-Ratio was computed for each of the 30 Belief Statements. A comparison was made among the three groups of educators identified above. Moreover, a second statistic, a t-test of independent means was calculated in comparing each of the three groups against each other in a search for significant differences.

Answers to the subsequent questions were sought in the study:

(1) Using ANOVA, do the three groups of educators (ELT, ADM, and SET) differ significantly in relation to the 30 Belief Statements concerning individualization of instruction and/or mastery learning?

(2) Using the t-test of independent means, do the three groups of educators (ELT, ADM and SET) differ significantly in relation to the 30 Belief Statements?

   (a) Do elementary teachers (ELT) differ significantly from administrators (ADM)?

   (b) Do administrators (ADM) differ significantly from secondary teachers (SET)

   (c) Do elementary teachers (ELT) differ significantly from secondary teachers (SET)?

(3) How do the three DODDS educator groups compare to stateside educators relative to aggregate means from SCALE-I?

(4) What implications and/or conclusions can be drawn from the results of SCALE-I for DODDS administrators, teachers, and other personnel interested in the teaching and learning process?

(5) Do the results of SCALE-I indicate a favorable or unfavorable climate for implementation of individualization of instruction and/or mastery learning?

FINDINGS

Results of SCALE-I and analysis of data indicate that when the three groups of educators were compared using ANOVA, there were no significant differences in relation to comparing each of the individual 30 Belief Statements group between group. For example, comparing Belief Statements number 1 thru 30 individually among the three groups produced no significant differences. See Table II.

Whereas Table II indicates no significant differences among the three groups, it may prove interesting and instructive to compare the high and low means of the educator groups and the following Belief Statements:

Item Number	Belief Statement	High Mean	Low Mean
4	STUDENT PLAN USED	3.75-(ADM)	3.02-(ELT)
10	DIFF GROUPINGS	4.37-(ADM)	3.58-(SET)
13	HELPERS ARE VARIED	4.37-(ADM)	3.55-(SET)
19	STUDENTS SELECT OBJECTIVE	4.25-(ADM)	3.67-(ELT)
22	HOME-SCHOOL COMMO, TEACHER	4.50-(ADM)	3.92-(SET)
23	HOME-SCHOOL COMMO, PRINCIPAL	4.50-(ADM)	3.81-(SET)
25	LEARNING CENTERS USED	4.37-(ADM)	3.57-(ELT)
28	WHAT DOES STUDENT DO NEXT?	4.25-(ADM)	3.88-(SET)
29	TEACH STUDENTS NOT SUBJECTS	4.75-(ADM)	3.95-(ELT)

ELT = Elementary Teachers; ADM = Administrators; SET = Secondary Teachers

NOTE: The above Belief Statements have been shortened. For the full statement, refer to Table II.

TABLE II

COMPARISON OF MEANS AMONG GROUPS

BELIEF STATEMENT	ELT	ADM	SET	Total MEAN	F Ratio	Sig.
1. The unique learning styles of students are identified and used in building a student's learning program.	3.92	3.75	3.92	3.86	.10	NS
2. The teaching style(s) of the teacher is matched with the learning style(s) of the student.	3.30	3.37	3.66	3.44	1.22	NS
3. Student interests are considered when building a unit or lesson plan.	4.19	4.25	4.00	4.14	.56	NS
4. A student-paced instructional plan is used more often than a group-paced instructional plan.	3.02	3.75	3.52	3.43	2.84	NS
5. Instructional objectives are used when planning instruction for a student or a group of students.	4.32	4.00	4.21	4.17	.50	NS
6. Instructional objectives are used for students that range from easiest to most difficult.	3.92	4.12	4.03	4.02	.23	NS
7. The size of the groups in the classroom is varied. For example, students may be found working in different sized groups such as 1-1, 1-8, 1-15, 0-6, or 2-15.	3.65	4.12	3.73	3.83	.58	NS
8. Content or subject matter is varied so as to match student learning style, ability and interest.	3.92	3.87	3.98	3.92	.06	NS
9. Assessment procedures are varied in the classroom. For example, much use is made of the following assessment procedures: performance tests, observations, paper and pencil tests, and work samples.	4.48	4.75	4.41	4.54	.69	NS

*Significant at the .05 Level, F-Ratio 3.15, Degrees of Freedom: 2 and 100.
NS = Not Significant.
GROUP MEANS: ELT: 3.92; ADM: 4.22; SET: 3.91; TOTAL MEAN: 4.01
ELT = Elementary Teachers; ADM = Administrators; and SET = Secondary Teachers

BELIEF STATEMENT	ELT	ADM	SET	Total MEAN	F Ratio	Sig.
10. Differentiated assessment techniques have resulted in different student grouping patterns in the classroom.	3.75	4.37	3.58	3.90	2.03	NS
11. The learning environment is varied for students, both inside and outside of the classroom.	4.02	4.62	4.13	4.25	1.35	NS
12. The teacher in the classroom knows all students by their first names and is concerned about their individual progress toward established goals of learning.	4.63	4.87	4.55	4.68	.82	NS
13. Various helpers are used in the classroom such as parent volunteers, student teachers, peer tutors, clerical aides, older students, and instructional aides.	3.87	4.37	3.55	3.93	1.85	NS
14. Learning prescriptions are frequently written or used for individual students or groups of students.	3.72	3.25	3.68	3.55	.70	NS
15. Individual progress charts are maintained for each student in the class.	3.26	4.00	3.62	3.62	1.73	NS
16. A student's schedule is varied according to time, space, and instructional materials.	3.68	4.37	3.64	3.89	1.64	NS
17. A learning cycle is frequently used for individual students or groups of students based on pre-assessment, setting objectives, identification of resources and activities, providing for instruction and post-assessment.	3.68	3.75	3.84	3.75	.25	NS
18. Learning activities are selected by the teacher which allow for discovery by students.	4.25	4.37	4.16	4.26	.34	NS
19. Students sometimes select their own learning objectives and activities.	3.67	4.25	3.50	3.80	1.97	NS

BELIEF STATEMENT	ELT	ADM	SET	Total Mean	F Ratio	Sig.
20. Students can identify or state the objectives on which they are working or progressing.	3.62	3.87	3.70	3.73	.19	NS
21. The teacher recognizes that students are more different than alike.	3.92	4.25	4.25	4.14	1.54	NS
22. A good home-school communications network is maintained by the teacher.	4.25	4.50	3.92	4.22	1.85	NS
23. A good home-school communications network is maintained by the building principal.	4.17	4.50	3.81	4.16	2.71	NS
24. Students are allowed to experience some success every day.	4.47	4.50	4.18	4.38	1.64	NS
25. Learning centers or stations are used in teaching various concepts.	3.57	4.37	3.62	3.85	2.05	NS
26. Instructional materials are varied. For example, appropriate materials are available for the slow learner as well as the fast learner.	4.02	4.75	4.05	4.27	1.57	NS
27. Activities are planned which allow students to work at their success levels rather than at their frustration levels.	4.17	4.25	4.03	4.15	.38	NS
28. When a student completes an assignment, a test, or other task, the teacher frequently asks the question, "What does this student need to learn or do next?"	4.00	4.25	3.88	4.04	2.84	NS
29. In our school, a commitment has been made to teach students rather than subjects.	3.95	4.75	4.11	4.27	2.23	NS
30. Teachers in our school can identify resources, both people and materials, that can help them personalize and individualize instruction for students.	4.12	4.37	4.05	4.18	.50	NS

	ELT	ADM	SET	TOTAL MEAN
OVERALL MEAN SCORES =	3.92	4.22	3.91	4.01
N =	41	8	55	

However, when ANOVA was utilized, comparing the aggregate means, group against group (ELT to ADM, ADM to SET, and ELT to SET) variance was detected as reflected by the significant F score of 7.53. See Table III.

TABLE III

COMPARISON OF AGGREGATE MEANS
AMONG THE THREE GROUPS
ANOVA

GROUP	AGGREGATE MEAN	F
Administrators (ADM)	4.22	7.53*
Elementary Teachers (ELT)	3.92	
Secondary Teachers (SET)	3.91	

*Significant at .05 Level, 2 and 87 DF, 3.15

When comparing aggregate means among the three groups, using a t-test of independent means, two significant differences were noted. ELT compared to ADM and ADM compared to SET reflect significant differences. No significant difference was noted in ELT compared to SET. See Table IV.

TABLE IV

COMPARISON OF AGGREGATE MEANS
AMONG THE THREE GROUPS
(t-TEST INDEPENDENT MEANS)

GROUP	t-Test
ELT COMPARED TO ADM	3.05*
ADM COMPARED TO SET	3.48*
ELT COMPARED TO SET	.06

*Significant at .05 Level, DF=58, 1.67

When the three groups of educators were compared to each other using a t-test of independent means, nineteen significant differences occurred among the thirty Belief Statements. Tables V thru VII show the Belief Statement means and t-test results at the .05 level of significance and a critical value of 1.67.

When elementary teachers (ELT) were compared to administrators (ADM) in the study, using a t-test of independent means, eight (8) of the 30 Belief Statements indicated a significant difference. See Table V.

TABLE V

SIGNIFICANT DIFFERENCES
COMPARISON OF MEANS BETWEEN GROUPS
ELEMENTARY TEACHERS (ELT)
COMPARED TO
ADMINISTRATORS (ADM)

Item No.	Belief Statement	Mean ELT	Mean ADM	t-Test*
4	STUDENT PACED PLAN	3.02	3.75	1.67
10	DIFF ASSESSMENT	3.75	4.37	1.74
11	LEARNING ENVIRONMENT VARIED	4.02	4.62	1.73
15	PROGRESS CHARTS	3.26	4.00	1.67
16	SCHEDULE IS VARIED	3.68	4.37	1.92
25	LEARNING CENTERS USED	3.57	4.37	2.28
26	INST MATERIALS VARIED	4.02	4.75	1.76
29	TEACH STUDENTS NOT SUBJECTS	3.95	4.75	2.12

* Significant at .05 Level, 1.67

NOTE: The above Belief Statements have been shortened. For the full statement, refer to Table II.

When administrators (ADM) were compared to secondary teachers (SET) in the study, using a t-test of independent means, seven (7) of the 30 Belief Statements indicated a significant difference.

TABLE VI

SIGNIFICANT DIFFERENCES
COMPARISON OF MEANS BETWEEN GROUPS
ADMINISTRATORS (ADM)
COMPARED TO
SECONDARY TEACHERS (SET)

Item No.	Belief Statement	Mean ADM	Mean SET	t-Test*
10	DIFF ASSESSMENT	4.37	3.58	1.87
16	SCHEDULE IS VARIED	4.37	3.64	1.70
19	STUDENTS SELECT OBJECTIVES	4.25	3.50	1.86
23	HOME-SCHOOL COMMO, PRINCIPAL	4.50	3.81	1.69
25	LEARNING CENTERS USED	4.37	3.62	1.79
26	INST MATERIALS VARIED	4.75	4.05	1.74
29	TEACH STUDENTS NOT SUBJECTS	4.75	4.11	1.79

* Significant at .05 Level, 1.67

NOTE: The above Belief Statements have been shortened. For the full statement, refer to Table II.

When elementary teachers (ELT) were compared to secondary teachers (SET) in the study, using a t-test of independent means, four (4) of the 30 Belief Statements indicated a significant difference. See Table VII.

TABLE VII

SIGNIFICANT DIFFERENCES
COMPARISON OF MEANS BETWEEN GROUPS
ELEMENTARY TEACHERS (ELT)
COMPARED TO
SECONDARY TEACHERS (SET)

Item No.	Belief Statement	Mean ELT	Mean SET	t-Test*
4	STUDENT PACED PLAN	3.02	3.52	2.19
21	STUDENTS-MORE DIFFERENT THAN ALIKE	3.92	4.25	1.68
23	HOME-SCHOOL COMMO, PRINCIPAL	4.17	3.81	1.74
24	STUDENTS EXPERIENCE SUCCESS EVERYDAY	4.47	4.18	1.69

* Significant at .05 Level, 1.67

NOTE: The above Belief Statements have been shortened. For the full statement, refer to Table II.

Administrators (ADM) led or tied in 24 of the 30 Belief Statements. Elementary teachers (ELT) led or tied in 3 of 30 Belief Statements. Secondary teachers led or tied in 5 of the 30 Belief Statements. See Table VIII for an overview of the three groups' mean scores by item number 1 thru 30.

TABLE VIII
HIGHEST MEAN SCORE
PER BELIEF STATEMENT ITEM
AMONG THE THREE GROUPS OF EDUCATORS

Item No.	Belief Statement	Educator Group	Item Mean Score
1.	LEARNING STYLES IDENTIFIED	ELT-SET	(t) 3.92
2.	TEACHING/LEARNING STYLES MATCHED	SET	3.66
3.	STUDENT INTERESTS CONSIDERED	ADM	4.25
4.	STUDENT PACED PLAN	ADM	3.75
5.	USE OF OBJECTIVES	ELT	4.32
6.	OBJECTIVES-EASY TO DIFFICULT	ADM	4.12
7.	SIZE OF GROUP VARIED	ADM	4.12
8.	CONTENT VARIED	SET	3.98
9.	ASSESSMENT VARIED	ADM	4.75
10.	DIFFERENT GROUPINGS	ADM	4.37
11.	ENVIRONMENT VARIED	ADM	4.62
12.	TEACHER KNOWS STUDENTS	ADM	4.87
13.	HELPERS ARE VARIED	ADM	4.37
14.	PRESCRIPTIONS USED	ELT	3.72
15.	PROGRESS CHARTS	ADM	4.00
16.	SCHEDULE IS VARIED	ADM	4.37
17.	LEARNING CYCLE USED	SET	3.84
18.	ALLOWS FOR DISCOVERY	ADM	4.37
19.	STUDENTS SELECT OBJECTIVE	ADM	4.25
20.	STUDENTS CAN STATE OBJECTIVES	ADM	3.87
21.	MORE DIFFERENT THAN ALIKE	ADM-SET	(T) 4.25
22.	HOME-SCHOOL COMMO, TEACHER	ADM	4.50
23.	HOME-SCHOOL COMMO, PRINCIPAL	ADM	4.50
24.	EXPERIENCE SUCCESS DAILY	ADM	4.50
25.	LEARNING CENTERS USED	ADM	4.37
26.	MATERIALS ARE VARIED	ADM	4.75
27.	SUCCESS LEVELS NOT FRUSTRATION LEVELS	ADM	4.25
28.	WHAT DOES STUDENT DO NEXT?	ADM	4.25
29.	TEACH STUDENTS NOT SUBJECTS	ADM	4.75
30.	IDENTIFY RESOURCES	ADM	4.37

ELT=Elementary Teachers; ADM=Administrators; SET=Secondary Teachers; (t)=tie

How do the three DODDS educator groups compare to a similar sample of stateside educators who also completed the 30 Belief Statements of SCALE-I? Table IX compares only the aggregate means of the 30 Belief Statements to a 1982 study conducted by this researcher. Administrators (ADM) in the stateside study

were a combination of elementary and secondary administrators. All stateside educators were in a sample conducted in southwest Missouri.

The DODDS educators compare quite favorably to the stateside educators as is indicated by TABLE IX. In fact, the mean averages for the DODDS educators and the stateside educators are almost equal to each other. The data suggests that both groups have relatively high beliefs relative to individualization and mastery learning.

TABLE IX

AGGREGATE MEANS
THREE DODDS EDUCATOR GROUPS
COMPARED TO
AGGREGATE MEANS-STATESIDE EDUCATORS

AGGREGATE MEANS DODDS EDUCATORS			AGGREGATE MEANS STATESIDE EDUCATORS		
ELT	3.92	(N=41)	ELT	4.27	(N=50)
ADM	4.22	(N=8)	ADM	3.87	(N=70)
SET	3.91	(N=55)	SET	3.88	(N=35)

SUMMARY

A thirty item instrument, representing Belief Statements about individualization of instruction and/or mastery learning, School Climate Assessment of Learning Environments (SCALE-I) was administered to 104 DODDS educators, representing three educator groups, during September and October 1989. The thirty items from SCALE-I represented the researcher's definition of individualization of instruction and/or mastery learning.

Included in the sample were 41 elementary teachers, 8 administrators, and 55 secondary teachers. All of the above were DODDS personnel from the Germany region.

Two statistics, ANOVA and the t-test of independent means were used in analyzing the data for this study. Findings from the study were:

(1) Comparisons among elementary teachers, administrators, and secondary teachers indicated no significant differences when each item of SCALE-I was compared among the three groups. However, a comparison of aggregate means among the three groups resulted in three comparisons and 2 of 3 significant differences utilizing ANOVA.

(2) Aggregate means from SCALE-I, in rank order, indicated that administrators had the highest aggregate mean score of 4.22, followed by elementary teachers with 3.92, and secondary teachers with an aggregate mean of 3.91.

The aggregate mean score for the three groups of DODDS educators was 4.01.

(3) When comparing elementary teachers to administrators, eight (8) of 30 Belief Statements from SCALE-I indicated significance at the .05 level of significance, using the t-test of independent means.

(4) Using the identical procedure outlined in number 3 above, administrators differed significantly from secondary teachers in seven (7) of the 30 Belief Statements.

(5) When elementary teachers were compared to secondary teachers, using the t-test of independent means, four (4) of the 30 Belief Statements indicated significant differences.

(6) When analyzing the 30 Belief Statements from SCALE-I by single item number, for highest mean score, elementary teachers led or tied in three (3) of the 30 Belief Statements. Administrators led or tied in twenty-four (24) of the 30 Belief Statements while secondary teachers led or tied in five (5) of the 30 Belief Statements.

CONCLUSIONS

Given the relatively high Belief Statement means of 3.92 and 3.91 for elementary and secondary teachers respectively and coupled with a high Belief Statement mean of 4.22 for administrators, it would appear that DODDS educators have a strong belief system relative to individualization of instruction and/or mastery learning.

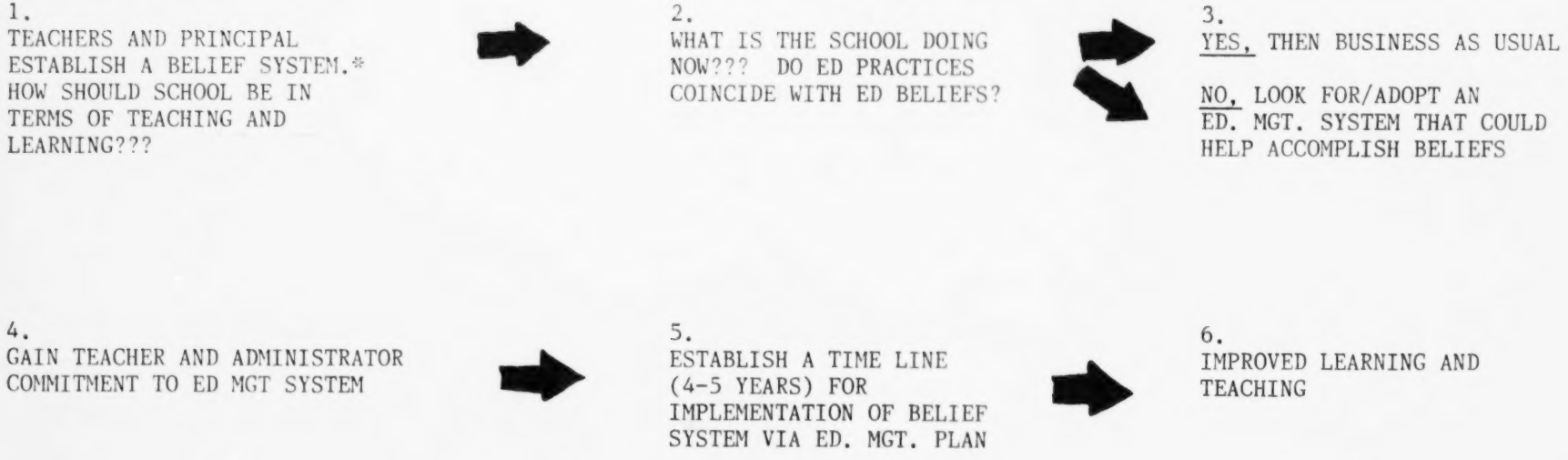
The focus of this study was solely on beliefs and not school practices. However, the first step in any instructional strategy implementation is that educators believe in the strategy or strategies being considered. As James Block, author of Building Effective Mastery Learning Schools has stated, "It is belief systems, not structures, which ultimately drive all that we do in schools." If there is a congruence between what we actually believe about schooling and actual school practice, individualization of instruction and/or mastery learning has a greater chance for successful implementation and maintenance.

From this study, it appears that the DODDS educators in the sample have a positive belief attitude or climate toward individualization of instruction and/or mastery learning.

Moreover, it seems appropriate to conclude that Figure 1 on page 16 may be helpful to DODDS administrators and teachers in pursuing further their positive climate for individualization and/or mastery learning.

FIGURE 1

ESTABLISHING BELIEFS


1.
TEACHERS AND PRINCIPAL ESTABLISH A BELIEF SYSTEM.* HOW SHOULD SCHOOL BE IN TERMS OF TEACHING AND LEARNING???
2.
WHAT IS THE SCHOOL DOING NOW??? DO ED PRACTICES COINCIDE WITH ED BELIEFS?
3.
YES, THEN BUSINESS AS USUAL
NO, LOOK FOR/ADOPT AN ED. MGT. SYSTEM THAT COULD HELP ACCOMPLISH BELIEFS
4.
GAIN TEACHER AND ADMINISTRATOR COMMITMENT TO ED MGT SYSTEM
5.
ESTABLISH A TIME LINE (4-5 YEARS) FOR IMPLEMENTATION OF BELIEF SYSTEM VIA ED. MGT. PLAN
6.
IMPROVED LEARNING AND TEACHING

*SUGGESTION:

USE ITEMS FROM SCALE-I
IN BUILDING BELIEF SYSTEM

APPENDIX I

SCHOOL CLIMATE ASSESSMENT OF LEARNING ENVIRONMENTS
SCALE-I

DIRECTIONS: Please read the attached Belief Statements and using the key provided, circle your ONE best answer. The statements SHOULD NOT be interpreted to mean that your school IS OR IS NOT doing what the statement indicates but only to what degree do you, as an educator, agree or disagree with the statement as constructed. SCHOOLS AND RESPONDENTS WILL NOT BE IDENTIFIED IN THIS STUDY.

KEY

5=Strongly Agree
4=Agree
3=Undecided
2=Disagree
1=Strongly Disagree

1. The unique learning styles of students are identified and used in building a student's learning program.

   5 4 3 2 1

2. The teaching style(s) of the teacher is matched with the learning style(s) of the students.

   5 4 3 2 1

3. Student interests are considered when building a unit or lesson plan.

   5 4 3 2 1

4. A student-paced instructional plan is used more often than a group-paced instructional plan.

   5 4 3 2 1

5. Instructional objectives are used when planning instruction for a student or a group of students.

   5 4 3 2 1

6. Instructional objectives are used for students that range from easiest to most difficult

   5 4 3 2 1

7. The size of groups in the classroom is varied. For example, students may be found working in different sized groups such as 1-1, 1-8, 1-15, 0-6, or 2-15.

5 4 3 2 1

8. Content or subject matter is varied so as to match student learning style, ability and interest.

5 4 3 2 1

9. Assessment procedures are varied in the classroom. For example, much use is made of the following assessment procedures: performance tests, observations, paper-and-pencil tests and work samples.

5 4 3 2 1

10. Differentiated assessment techniques have resulted in different student grouping patterns in the classroom.

5 4 3 2 1

11. The learning environment is varied for students, both inside and outside of the classroom.

5 4 3 2 1

12. The teacher in the classroom knows all students by their first names and is concerned about their individual progress toward established goals of learning.

5 4 3 2 1

13. Various helpers are used in the classroom such as parent volunteers, student teachers, peer tutors, clerical aides, older students, and instructional aides.

5 4 3 2 1

14. Learning prescriptions are frequently written or used for individual students or groups of students.

5 4 3 2 1

15. Individual progress charts are maintained for each student in the class.

5 4 3 2 1

16. A student's schedule is varied according to time, space and instructional materials.

5 4 3 2 1

17. A learning cycle is frequently used for individual students or groups of students based on pre-assessment; setting objectives, identifying resources and activities, providing for instruction and conducting a post-assessment.

5 4 3 2 1

18. Learning activities are selected by the teacher which allow for discovery by students.

5 4 3 2 1

19. Student sometimes select their own learning objectives and activities.

5 4 3 2 1

20. Students can identify or state the objectives on which they are working or progressing.

5 4 3 2 1

21. The teacher recognizes that students are more different than alike.

5 4 3 2 1

22. A good home-school communications network is maintained by the teacher.

5 4 3 2 1

23. A good home-school communications network is maintained by the building principal.

5 4 3 2 1

24. Students are allowed to experience some success every day.

5 4 3 2 1

25. Learning centers or stations are used in teaching various concepts.

5 4 3 2 1

26. Instructional materials are varied. For example, appropriate materials are available for the slow learner as well as the fast learner.

5 4 3 2 1

27. Activities are planned which allow students to work at their success levels rather than at their frustration levels.

5 4 3 2 1

28. When a student completes an assignment, a test or other task, the teacher frequently asks the question, "What does this student need to learn or do next?"

5 4 3 2 1

29. In our school, a commitment has been made to teach students rather than subjects.

5 4 3 2 1

30. Teachers in our school can identify resources, both people and materials, that can help personalize and individualize instruction for students.

5 4 3 2 1

APPENDIX II

t-TEST INDEPENDENT MEANS

SIGNIFICANCE: .05 LEVEL, 1.67

		DF	t	SIGNIFICANCE
ITEM #1				
BETWEEN:				
	ELT AND ADM	46	.45	NS
	ADM AND SET	61	.43	NS
	ELT AND SET	93	.01	NS
ITEM #2				
BETWEEN:				
	ELT AND ADM	46	.15	NS
	ADM AND SET	60	.73	NS
	ELT AND SET	92	1.54	NS
ITEM #3				
BETWEEN:				
	ELT AND ADM	47	.14	NS
	ADM AND SET	60	.69	NS
	ELT AND SET	93	.95	NS
ITEM #4				
BETWEEN:				
	ELT AND ADM	43	1.67	*
	ADM AND SET	59	.51	NS
	ELT AND SET	88	2.19	*
ITEM #5				
BETWEEN:				
	ELT AND ADM	46	1.06	NS
	ADM AND SET	61	.61	NS
	ELT AND SET	93	.59	NS

	DF	t	SIGNIFICANCE
ITEM #6			
BETWEEN:			
ELT AND ADM	46	.49	NS
ADM AND SET	58	.25	NS
ELT AND SET	90	.56	NS
ITEM #7			
BETWEEN:			
ELT AND ADM	46	1.20	NS
ADM AND SET	59	.87	NS
ELT AND SET	91	.35	NS
ITEM #8			
BETWEEN:			
ELT AND ADM	45	.12	NS
ADM AND SET	60	.28	NS
ELT AND SET	91	.27	NS
ITEM #9			
BETWEEN:			
ELT AND ADM	47	.91	NS
ADM AND SET	59	1.19	NS
ELT AND SET	92	.45	NS
ITEM #10			
BETWEEN:			
ELT AND ADM	47	1.74	*
ADM AND SET	59	1.87	*
ELT AND SET	92	.77	NS

		DF	t	SIGNIFICANCE
ITEM #11				
BETWEEN:				
	ELT AND ADM	46	1.73	*
	ADM AND SET	59	1.38	NS
	ELT AND SET	91	.52	NS
ITEM #12				
BETWEEN:				
	ELT AND ADM	47	.90	NS
	ADM AND SET	58	1.36	NS
	ELT AND SET	91	.53	NS
ITEM #13				
BETWEEN:				
	ELT AND ADM	47	1.21	NS
	ADM AND SET	58	1.63	NS
	ELT AND SET	91	1.19	NS
ITEM #14				
BETWEEN:				
	ELT AND ADM	46	1.15	NS
	ADM AND SET	57	1.06	NS
	ELT AND SET	89	.18	NS
ITEM #15				
BETWEEN:				
	ELT AND ADM	47	1.67	*
	ADM AND SET	57	.77	NS
	ELT AND SET	90	1.43	NS

		DF	t	SIGNIFICANCE
ITEM #16				
BETWEEN:				
	ELT AND ADM	47	1.92	*
	ADM AND SET	59	1.70	*
	ELT AND SET	92	.17	NS
ITEM #17				
BETWEEN:				
	ELT AND ADM	47	.16	NS
	ADM AND SET	59	.22	NS
	ELT AND SET	92	.70	NS
ITEM #18				
BETWEEN:				
	ELT AND ADM	46	.45	NS
	ADM AND SET	60	.71	NS
	ELT AND SET	92	.53	NS
ITEM #19				
BETWEEN:				
	ELT AND ADM	46	1.54	NS
	ADM AND SET	59	1.86	*
	ELT AND SET	91	.80	NS
ITEM #20				
BETWEEN:				
	ELT AND ADM	46	.64	NS
	ADM AND SET	60	.38	NS
	ELT AND SET	92	.35	NS

		DF	t	SIGNIFICANCE
ITEM #21				
	BETWEEN:			
	ELT AND ADM	46	.81	NS
	ADM AND SET	60	.01	NS
	ELT AND SET	92	1.68	*
ITEM #22				
	BETWEEN:			
	ELT AND ADM	46	.71	NS
	ADM AND SET	61	1.43	NS
	ELT AND SET	93	1.48	NS
ITEM #23				
	BETWEEN:			
	ELT AND ADM	45	1.09	NS
	ADM AND SET	60	1.69	*
	ELT AND SET	91	1.74	*
ITEM #24				
	BETWEEN:			
	ELT AND ADM	46	.01	NS
	ADM AND SET	60	.96	NS
	ELT AND SET	92	1.69	*
ITEM #25				
	BETWEEN:			
	ELT AND ADM	46	2.28	*
	ADM AND SET	59	1.79	*
	ELT AND SET	91	.21	NS

		DF	t	SIGNIFICANCE
ITEM #26				
BETWEEN:				
	ELT AND ADM	45	1.76	*
	ADM AND SET	60	1.74	*
	ELT AND SET	91	.12	NS
ITEM #27				
BETWEEN:				
	ELT AND ADM	46	.20	NS
	ADM AND SET	61	.65	NS
	ELT AND SET	93	.72	NS
ITEM #28				
BETWEEN:				
	ELT AND ADM	33	.61	NS
	ADM AND SET	41	.97	NS
	ELT AND SET	60	.46	NS
ITEM #29				
BETWEEN:				
	ELT AND ADM	46	2.12	*
	ADM AND SET	60	1.79	*
	ELT AND SET	92	.76	NS
ITEM #30				
BETWEEN:				
	ELT AND ADM	46	.88	NS
	ADM AND SET	61	.92	NS
	ELT AND SET	93	.38	NS

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